

WBU



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,488	08/22/2003	William B. Butler	TRW(AP)6588	9427
26294	7590	02/03/2006	EXAMINER	
TAROLLI, SUNDHEIM, COVELL & TUMMINO L.L.P. 1300 EAST NINTH STREET, SUITE 1700 CLEVEVLAND, OH 44114			ILAN, RUTH	
			ART UNIT	PAPER NUMBER
			3616	

DATE MAILED: 02/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/646,488	Applicant(s) BUTLER ET AL.	
	Examiner Ruth Ilan	Art Unit 3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-4,9 and 12-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-17 and 19 is/are allowed.
- 6) ☒ Claim(s) 3,4,9 and 18 is/are rejected.
- 7) ☒ Claim(s) 3 and 12 is/are objected to.
- 8) ☒ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/14/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 16, at lines 3-4, "a radially extending fill passage" is indefinite because it is unclear how this fill passage relates to the filling passage recited in claim 13.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Lewis '095 teaches an inflator with a tubular body portion (11) with an igniter end cap (36) and a diffuser end cap (23) secured to first and second ends, the body and each end cap define a fluid chamber (12) having a fluid stored under pressure. A first (at 24) and second (at 17) passages extending through the diffuser end cap. A burst disk (18) closes the first passage. An igniter (15) is supported by the igniter end cap and spaced axially away from the burst disk and is actuable for opening the burst disk (col. 9, lines 61-65.) While Lewis '905 teaches that both the first and second passage are located in the diffuser end cap, Lewis '905 fails to teach that the fill passage includes a valve with a housing and movable valve member. Lewis et al. (3,985,375) teaches a fill passage (38) for an air bag inflator that uses a fill valve (42) having a valve housing and a valve member (ball or check valve 42.) The fill valve is preferably used because it prevents backflow of the pressurized gas during filling (see col. 4, lines 5-10.) In view of

Art Unit: 3616

the teaching of Lewis et al., it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the inflator of Lewis '095 to include a filling passage that has a valve and a valve body, in order to prevent backflow during filling.

4. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis (US 6,199,905) in view of Lewis et al. (3,985,375) as applied to claim 9 above and further in view of Headley et al. (US 5,683,107.) The Lewis and Lewis et al. combination lacks an isolation disk 164 closing a passage in the igniter end cap. Headley et al. teaches an isolation disk 164 closing a passage in the igniter end cap 82 (see Figure 3.) From this teaching of Headley et al., it would have been obvious to one of ordinary skill in the art at the time of the invention to further modify Lewis '095 by providing an isolation disk closing a passage in the igniter end cap in order to protect the igniter from the pressurized gas mixture.

5. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis (US 6,199,905) in view of Lewis et al. (3,985,375) as applied to claim 9 above and further in view of Yamamori et al. (WO 98/49034.) Lewis in view of Lewis et al. is discussed above, and does not disclose a combustible gas mixture or a plug.

Yamamori et al. teaches an inflator including a combustible gas mixture 19 (see col. 5, lines 7-9); and a plug (2e) for the fill valve. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the inflator of Lewis in view of Lewis et al. to include a plug for the fill valve, as taught by Yamamori et al., in order to prevent gas from leaking through the fill valve. Further, it would have been obvious to one having ordinary skill in the art at the time of the invention to include a combustible

Art Unit: 3616

gas mixture as taught by Yamamori et al. with the inflator of Lewis in view of Lewis et al. in order to increase the output of the inflator or reduce the required size of the inflator.

Allowable Subject Matter

6. Claims 3 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. Claims 13-17 and 19 are allowed.

Response to Arguments

8. Applicant's arguments with respect to claims 18, 2, 4, and 9 have been considered but are moot in view of the new ground(s) of rejection.

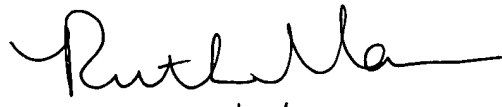
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ruth Ilan whose telephone number is 571-272-6673. The examiner can normally be reached on Monday-Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on 571-272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3616

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ruth Ilan
Primary Examiner
Art Unit 3616


2/1/06

RI
2/1/06